

Typography

Typographers' Inn

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1 METAFONT fonts

Although the majority of the typefaces installed with a standard T_EX distribution are available in Postscript Type 1 format, there are still several very useful ones available only in METAFONT format. These include the specialist fonts in the bookhands bundle, such as **RUSIIC** or **UNCIAL**, the BB Dingbats, the cartographic symbols (Karta), Ogham, and many others.

METAFONT is a font outline language, but by default T_EX systems use the bitmap output from such fonts (a `.pk` font file). It is possible that these will never be rewritten as PostScript fonts, so using them will continue to require a T_EX system, with a little help from *The L^AT_EX Companion* [2].

The Adobe *Acrobat Reader* notoriously used to make a complete hames of bitmapped fonts on screen, blurring them into unreadability while printing them perfectly, but this has been improved significantly in recent versions. It is very fashionable in certain quarters to decry the use of bitmapped fonts on purely technical grounds, disregarding the fact that they do actually provide a useful — and in some cases essential — instantiation of a specific design.

There are some problems: a few of the fonts available (Ogham is one example) produce microscopically tiny glyphs by default, requiring a correction to the METAFONT code; and not all of them can yet be used directly in L^AT_EX via a standard package. But they are all worth investigating, not just for special effects, but because they are a useful contribution to the range of typefaces available to us.

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2 Type 1 (PostScript) fonts

Better late than never: I finally managed to rescue my Type 1 virtual font installation script from the ravages of a damaged disk drive. I've been using this for a decade or more, and I documented what it did in 'Formatting Information' [1, §8.3.2], but I never released it into the wild, as it was very specific to my own system.

I've now updated it and documented it, and it's ready to test, although the platform is very restricted: it's a *bash* (1) shell script for T_EX Live on Ubuntu Gutsy, installing typefaces from the Bitstream 500-font CD. If you have all this, feel free to download it from <http://latex.silmaril.ie/fonts/cdvpf> (too early for CTAN).

So what on earth am I doing? In the face of Alan Jeffrey's (and others') *fontinst*, which uses L^AT_EX itself to install fonts, and Jonathan Kew's wonderful X_YT_EX, which ferrets out and lets you use every font on your hard disk, isn't installing Type 1 fonts a bit, well, *retro*?

Yes and no: while a lot of people are moving to OpenType and other post-PostScript formats, there is still a vast supply of Type 1 fonts around, and still a lot of people who want to install them (to judge by the posts on the topic to `comp.text.tex`). The problem with installing them isn't the making of the `.tfm` files, it's making them play nicely with L^AT_EX, and *that's* what `cdvpf` does.

It takes a typeface from a standard distribution mapfile (currently just `bitstream.map`) — for example a font family name like `bun`; Bitstream's version of Univers which they call ZurichBT — and creates all the `.tfm` and `.vf` files, moves them (and the `.pfb` and `.afm` files) to the right places, writes a `.sty` (package) file and the relevant `.fd` (font definition) and `.map` files, and finally runs `updmap` and `texhash` to leave you with an immediately usable entire typeface and a report on what was installed. Figure 1 shows the result of typing the command:

```
$ cdvpf bitstream univers ZurichBT s
```

It's by no means perfect, but it seems to work, and needs testing. The next stages are:

- generalize it for all Unix-like platforms;
- add support for other CDs/DVDs of typeface collections (currently working on FontSite);
- add support for other encodings (currently it only does T1);
- clean up series and shape detection;
- add isolated-font classification detection, so that arbitrary `.pfb/.afm` pairs can be installed without the need for a `.map` file to pre-exist;
- eventually rewrite it in something platform-independent, with a GUI front-end.

Type 1 font files notoriously lack full information about themselves (it's often impossible to machine-detect a sans-serif typeface, for example, hence the final parameter on the command given above). But it still ought to be easier to install Type 1 fonts for L^AT_EX and have them 'just work'.

Table 1: Fonts installed

Family	Series	Shape	
bun	l	n	The quick brown fox jumped over the lazy dog
bun	l	sc	The quick brown fox jumped over the lazy dog
bun	l	it	<i>The quick brown fox jumped over the lazy dog</i>
bun	m	n	The quick brown fox jumped over the lazy dog
bun	m	sc	The quick brown fox jumped over the lazy dog
bun	m	it	<i>The quick brown fox jumped over the lazy dog</i>
bun	b	n	The quick brown fox jumped over the lazy dog
bun	b	sc	The quick brown fox jumped over the lazy dog
bun	b	it	<i>The quick brown fox jumped over the lazy dog</i>
bun	c	n	The quick brown fox jumped over the lazy dog
bun	c	sc	THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG
bun	c	it	<i>The quick brown fox jumped over the lazy dog</i>
bun	mx	n	The quick brown fox jumped over the lazy dog
bun	mx	sc	THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG
bun	bx	n	The quick brown fox jumped over the lazy dog
bun	bx	sc	THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG
bun	cx	n	The quick brown fox jumped over the lazy dog
bun	cx	sc	THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG
bun	ux	n	The quick brown fox jumped over the lazy dog
bun	ux	sc	THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG
bun	lc	n	The quick brown fox jumped over the lazy dog
bun	lc	sc	THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG
bun	lc	it	<i>The quick brown fox jumped over the lazy dog</i>
bun	mc	n	The quick brown fox jumped over the lazy dog
bun	mc	sc	THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG
bun	mc	it	<i>The quick brown fox jumped over the lazy dog</i>
bun	bc	n	The quick brown fox jumped over the lazy dog
bun	bc	sc	THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG
bun	bc	it	<i>The quick brown fox jumped over the lazy dog</i>
bun	lq	n	The quick brown fox jumped over the lazy dog
bun	lq	sc	THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG
bun	mq	n	The quick brown fox jumped over the lazy dog
bun	mq	sc	THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG
bun	bq	n	The quick brown fox jumped over the lazy dog
bun	bq	sc	THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG
bun	x	n	The quick brown fox jumped over the lazy dog
bun	x	sc	THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG

Table 2: File locations

File	Location
Font definition	/usr/local/share/texmf/tex/latex/psnfss/tibun.fd
Style (package) file	/usr/local/share/texmf/tex/latex/psnfss/univers.sty
Font map file	/usr/local/share/texmf/dvips/config/bun.map
Font map reference	/home/peter/.texmf-config/updmap.d/10local.cfg
Adobe Font Metrics	/usr/local/share/texmf/fonts/afm/bitstrea/univers
Postscript Font Binaries	/usr/local/share/texmf/fonts/type1/bitstrea/univers
T _E X Font Metrics	/usr/local/share/texmf/fonts/tfm/bitstrea/univers
Virtual Fonts	/usr/local/share/texmf/fonts/vf/bitstrea/univers

3

Figure 1: Part of the report output of the `cdvf` font installation script

3 New forum, old forum

John Coffey has started a new forum for technical questions and answers related to typesetting at <http://typesetterforum.com>. This is in bulletin-board format rather than a mailing list like TYPO-L, and has lots of interesting posts from users of all the popular systems (Quark, InDesign, 3B2-as-was, and others, as well as L^AT_EX).

For those of you who haven't discovered it yet, the typography mailing list TYPO-L is at <http://listserv.heanet.ie/typo-l.html> where you can join or leave, or browse the archives.

Strange that there is no global Usenet newsgroup on typography.

4 2008 TUG meeting in Cork

The Call for Papers went out in February and we already have some good abstracts submitted. If you're doing something interesting with T_EX-and-friends (or with type, or in a related field), then you should let everyone know — and the best way to do that is to write it up and submit it (or send it to TUGboat).

Registration is now open on the web site at <http://tug.org/tug2008/>, so sign up and book early. We look forward to seeing you all here!

Afterthought

Thanks to Michael Everson for pointing this out in TYPO-L (quoted with permission from David Friedman's Ironic Sans blog, <http://www.ironicsans.com/2008/02/>):

keming. (kēm'-īng). *n.* The result of improper kerning.

References

- [1] Peter Flynn. Formatting Information. *TUGboat*, 23(2):115–250, 2002.
- [2] Frank Mittelbach, Michel Goossens, Johannes Braams, David Carlisle, and Chris Rowley. *The L^AT_EX Companion*. Addison-Wesley/Pearson Education, Boston, MA, 2nd edition, 2004.

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